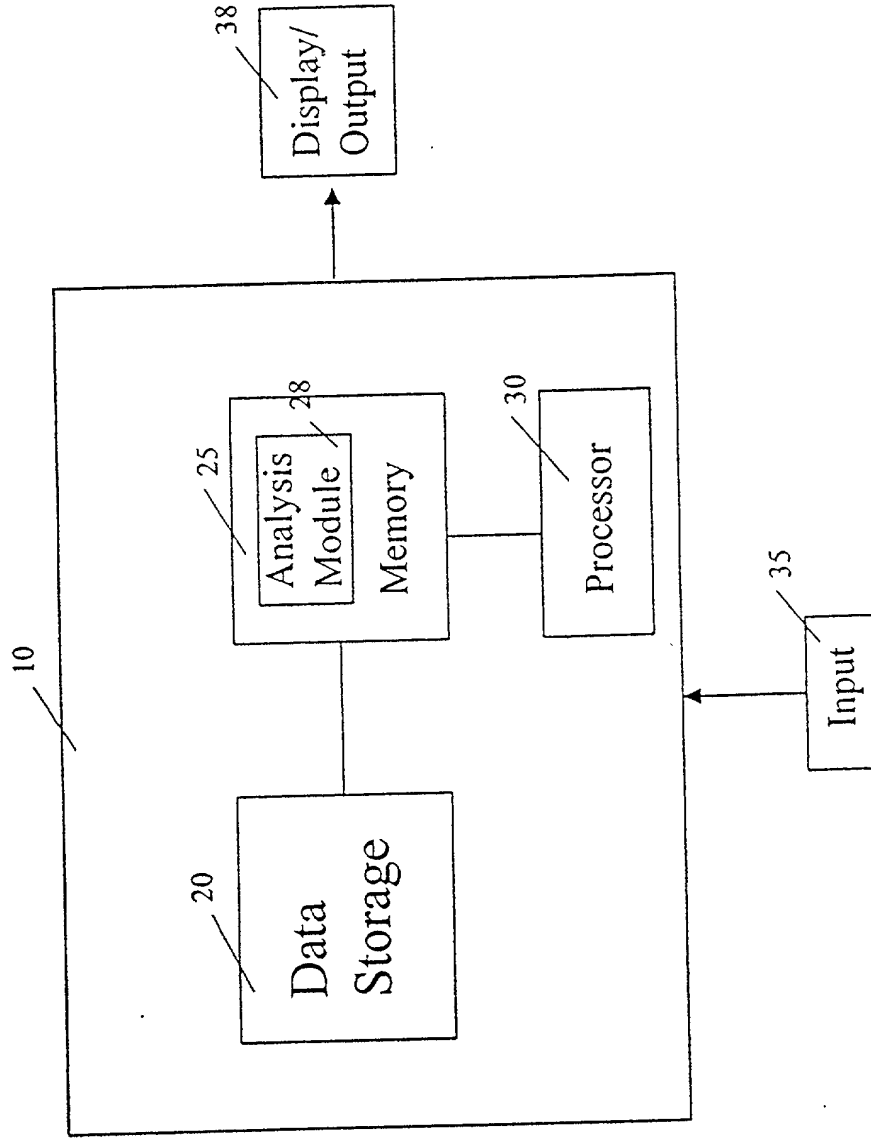


Figure 1

Figure 2



092207650

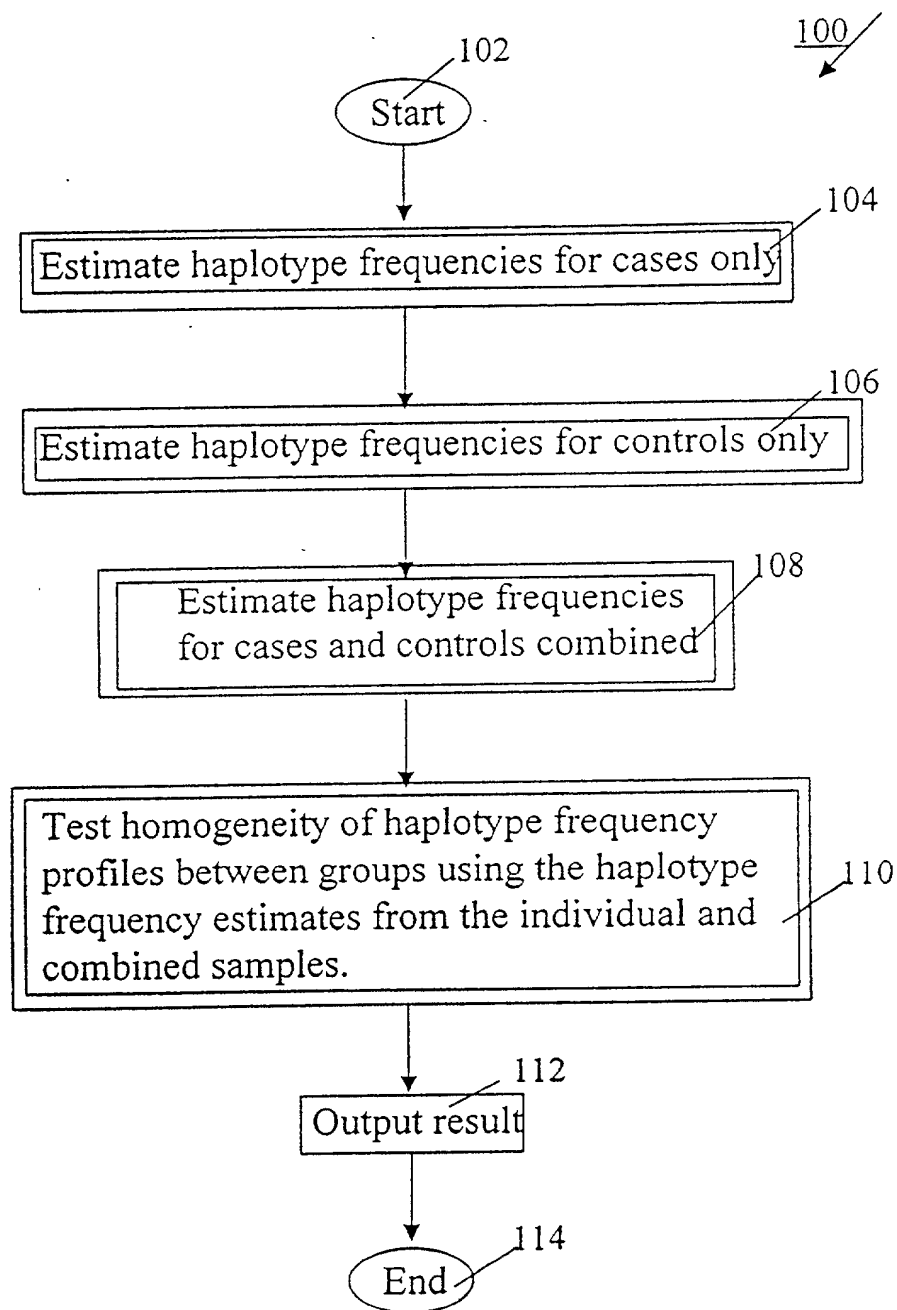


Figure 3

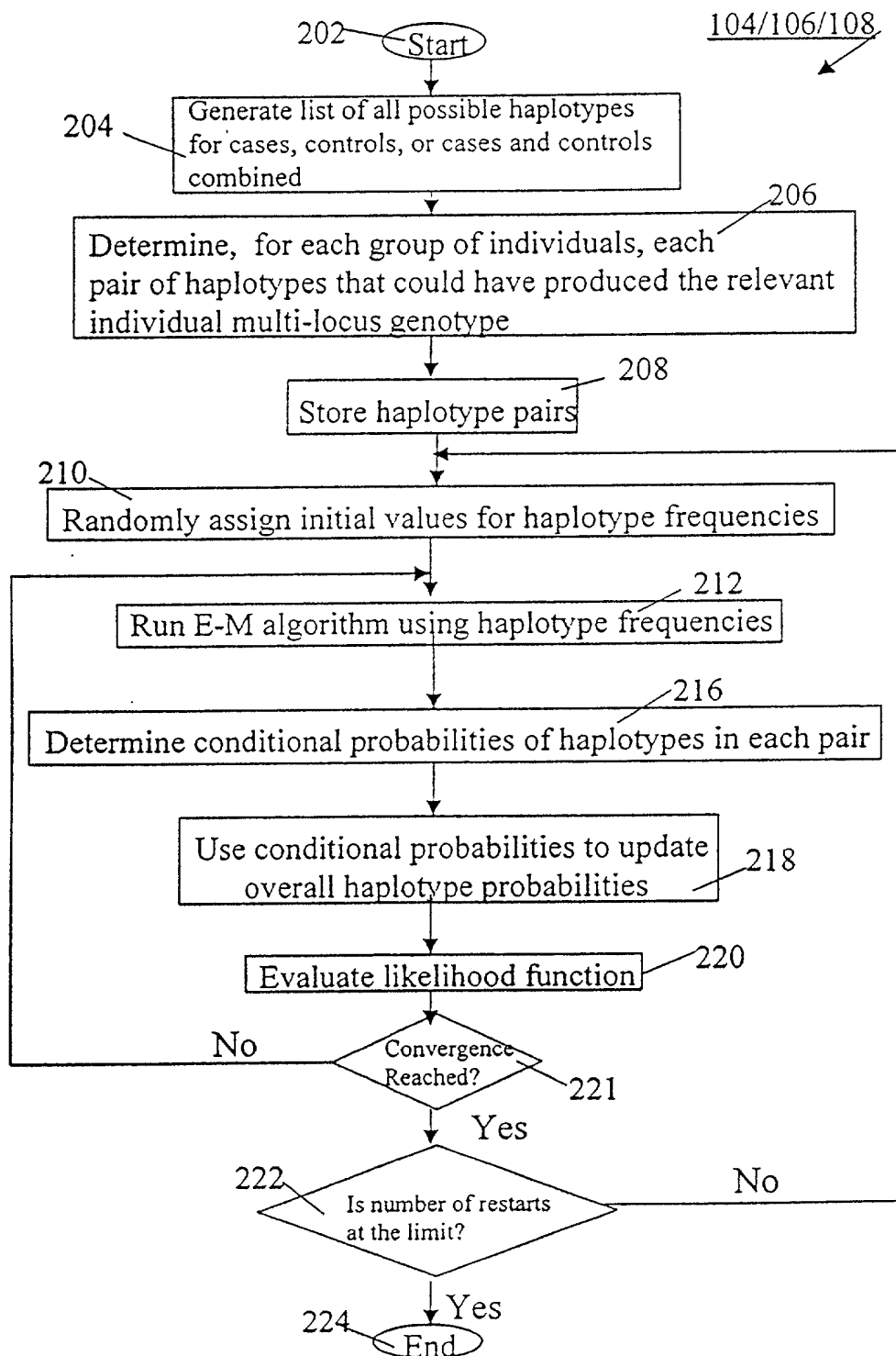


Figure 4

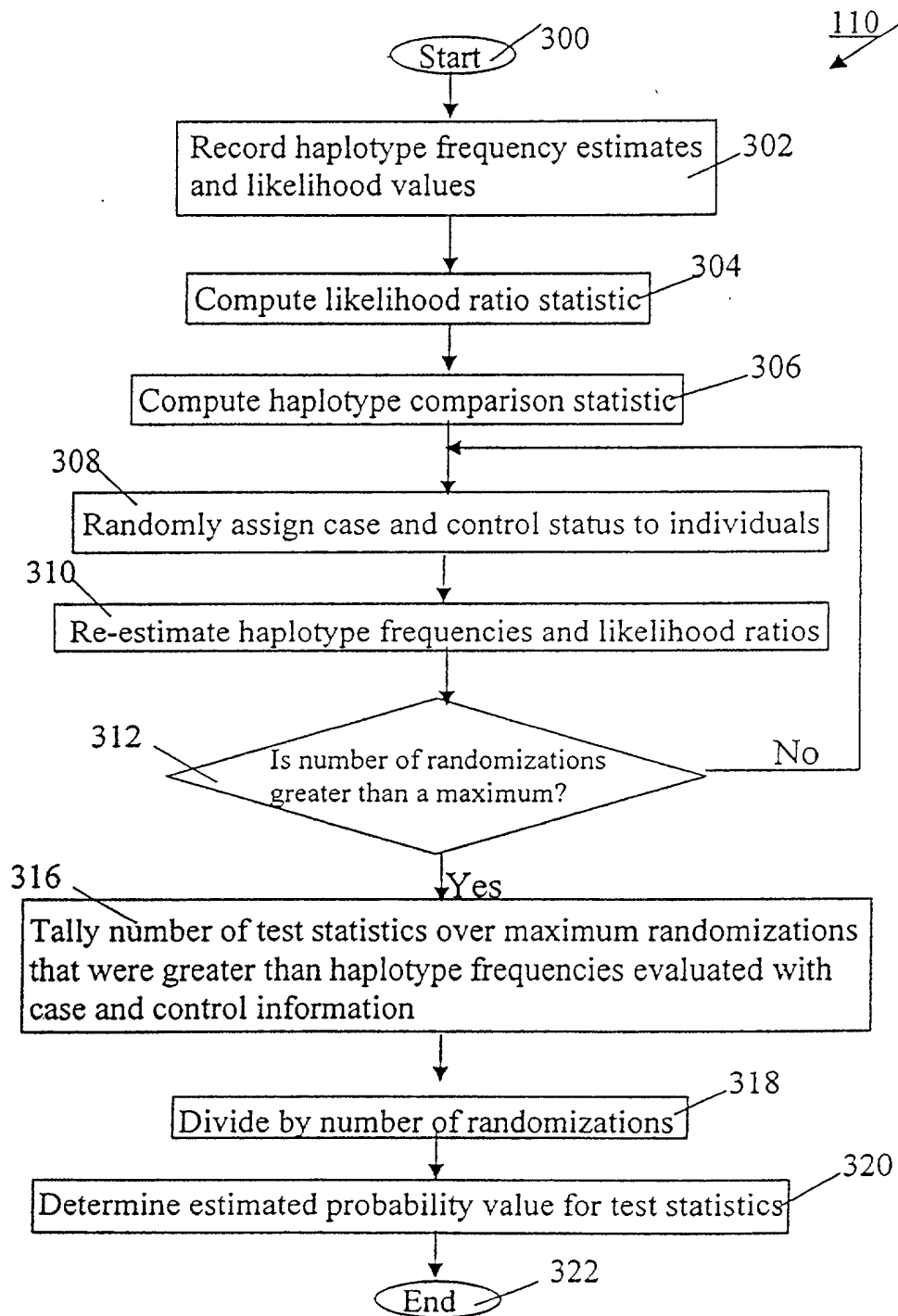


Figure 5

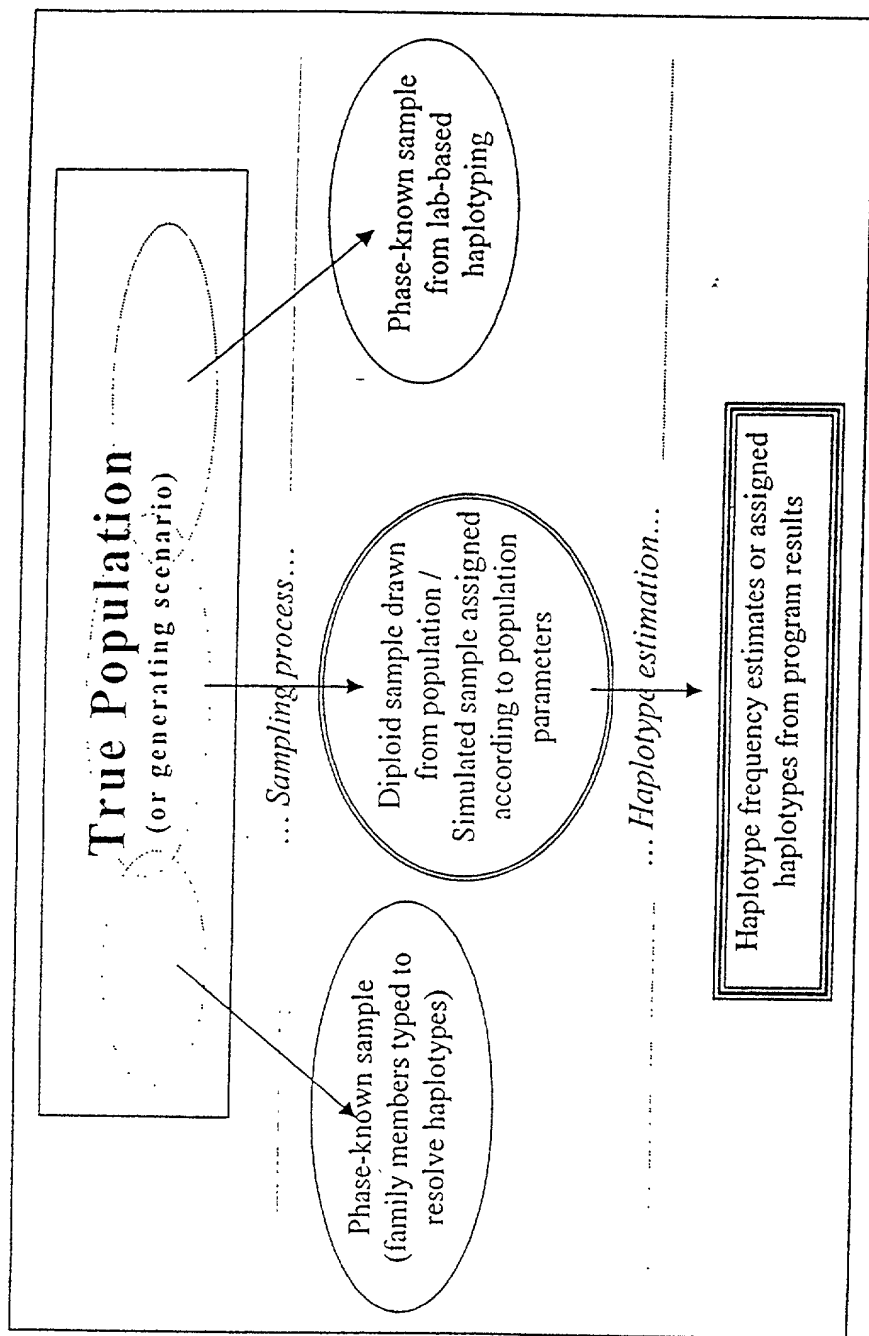


Figure 6

001030 07164  
T09T20" 0920T060

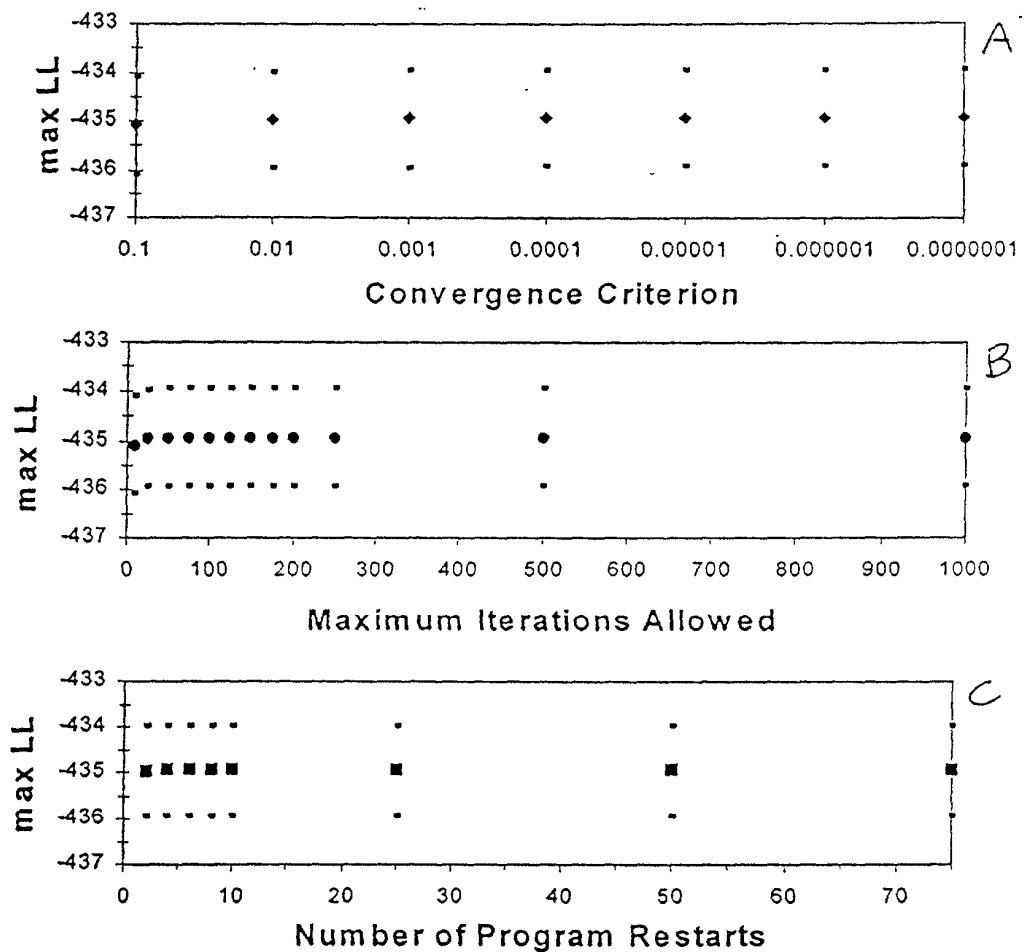


Figure 7





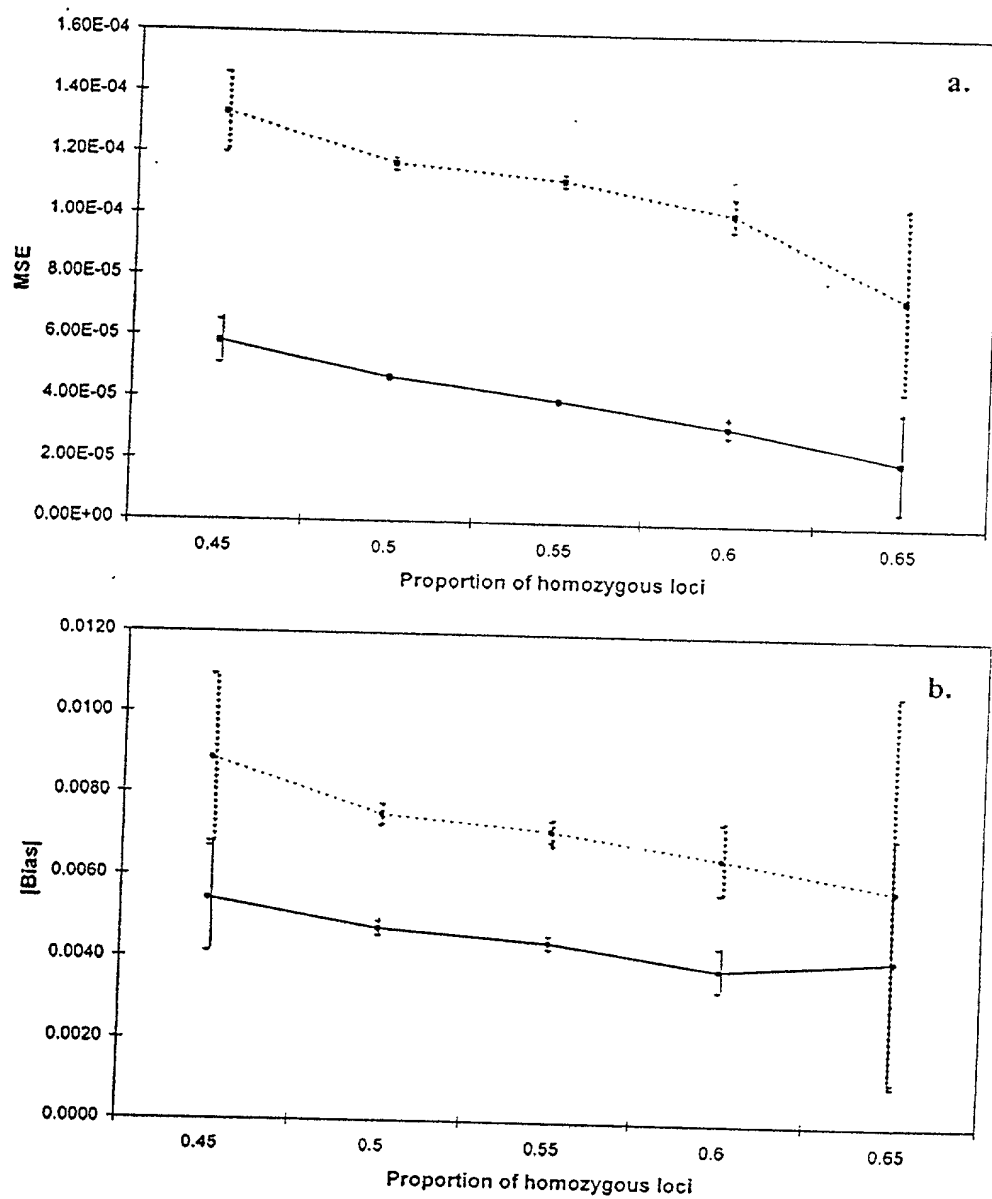


Figure 9

0923T1350

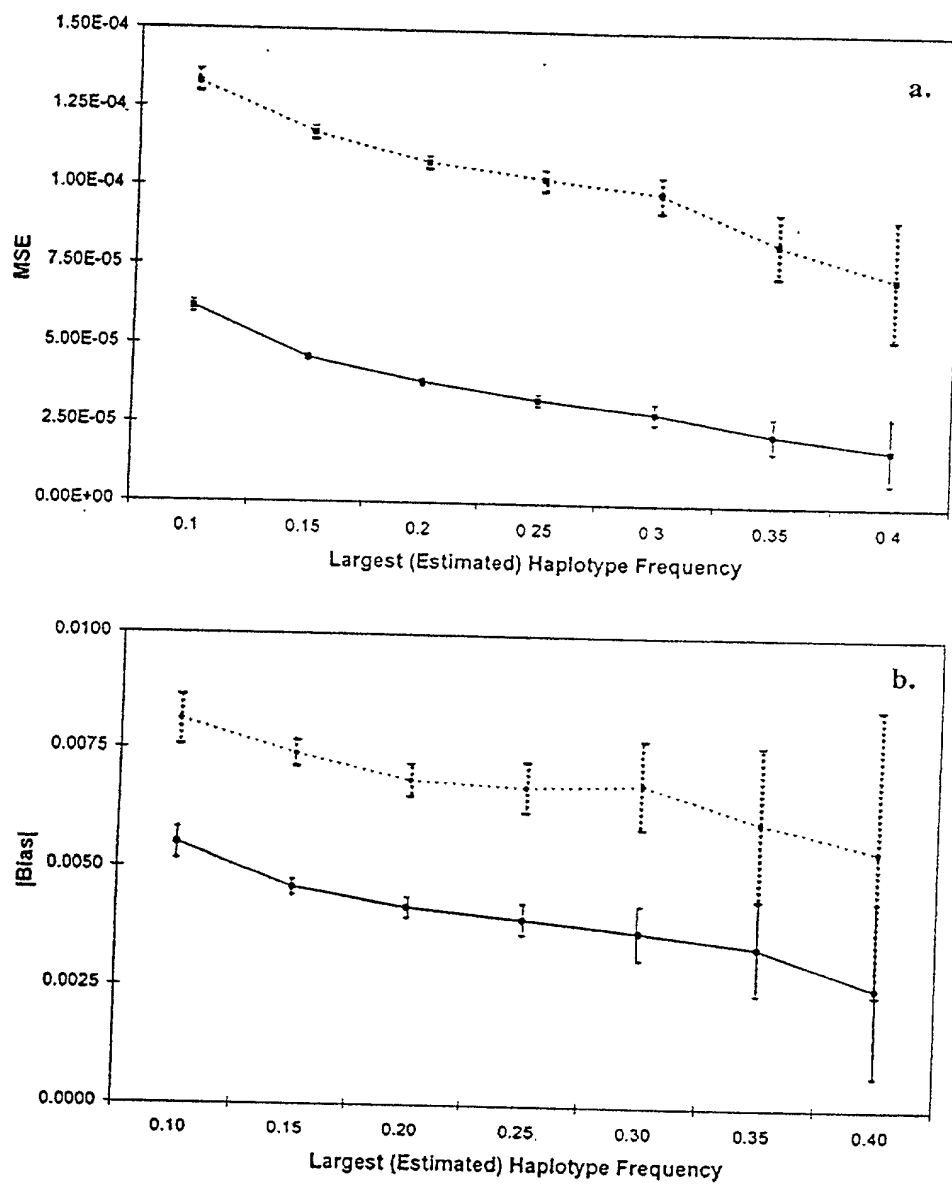


Figure 10

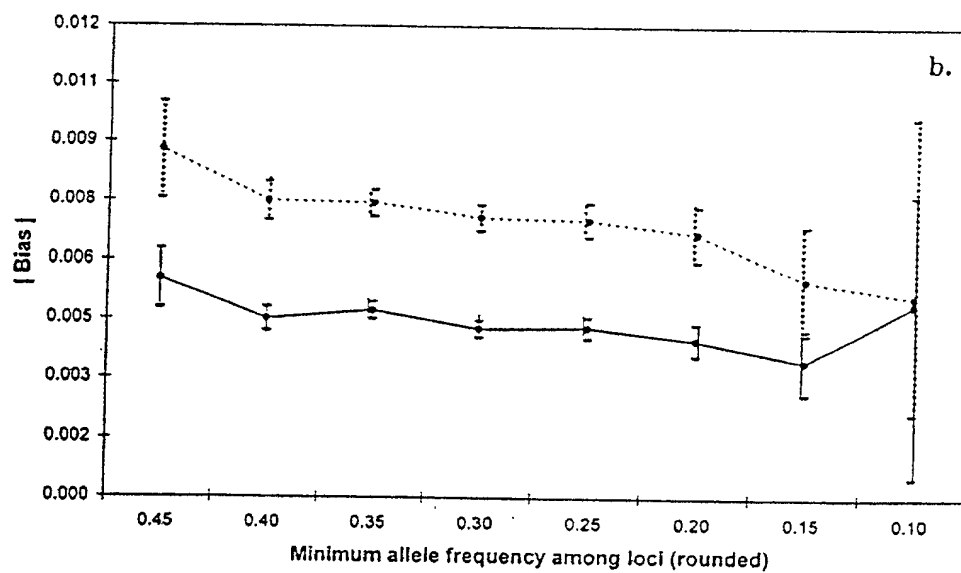
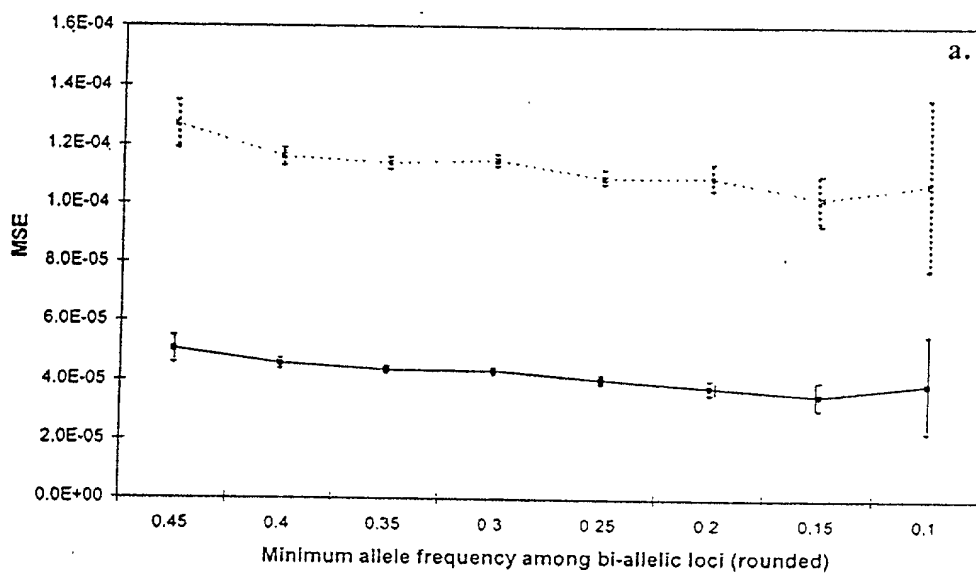


Figure 11

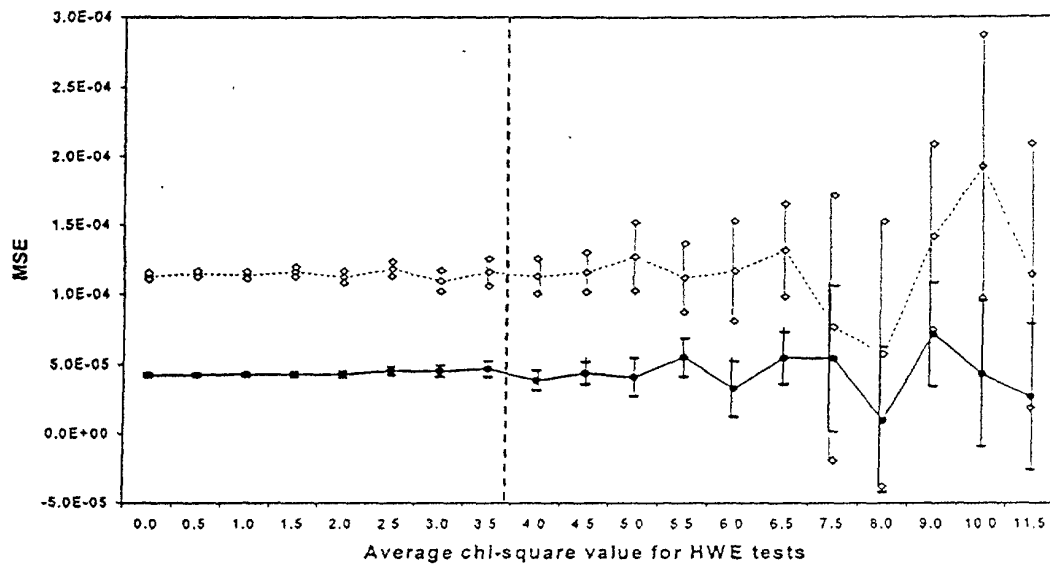


Figure 12

10918260-071601

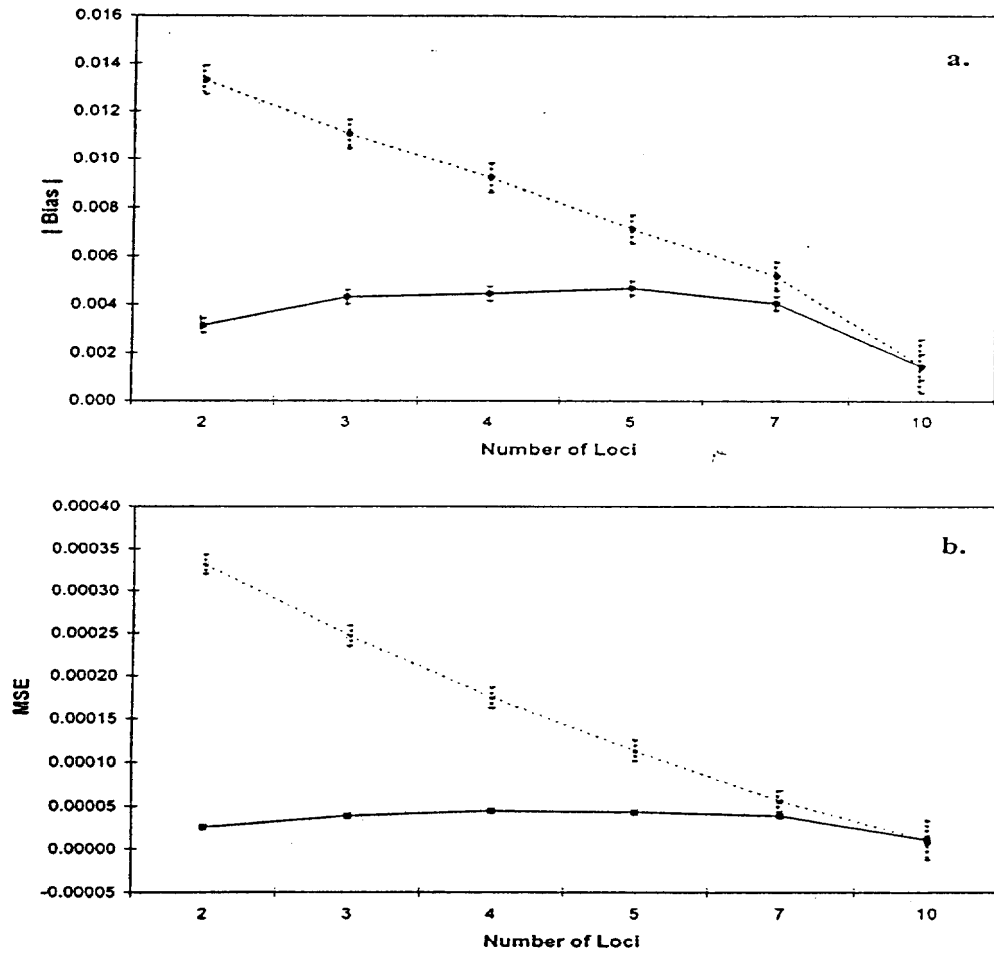


Figure 13

Table. Regression of absolute value of bias between estimated and generating haplotype frequencies on all factors.

Regression including all factors					Single-factor models		Prob>F
Variable	Estimate	Std. Error	T test	Prob >  T	R**2	F	
2-locus Haplotypes:							
INTERCEP	0.031017	0.00220248	14.083	0.0001			
Prop HOMOZ	-0.029256	0.00369778	-7.912	0.0001	0.0383	395.1818	0.0001
Freq largest Hap.	-0.00238	0.00258249	-0.922	0.3568	0.0468	487.0159	0.0001
Chi-sq for LD	-3.0429E-05	0.00000383	-7.944	0.0001	0.0085	84.85	0.0001
H-W status	-0.000878	0.00080228	-1.094	0.274	0.0004	4.0044	0.0454
Avg. Min Allele freq.	0.008471	0.00478999	1.769	0.077	0.0337	345.6019	0.0001
5-locus haplotypes:							
INTERCEP	0.058585	0.00499106	11.738	0.0001			
PropHOMOZ	-0.004128	0.0033604	-1.229	0.2193	0.0027	9.7079	0.0018
Freq largest Hap.	-0.007354	0.00163342	-4.502	0.0001	0.0085	30.2177	0.0001
Avg D' for pairwise LD matrix	0.013172	0.00102619	12.836	0.0001	0.0452	166.6065	0.0001
H-W status	-0.00155	0.00139011	-1.115	0.265	0.0002	0.8555	0.3551
Avg. Min Allele freq.	-8.5172E-05	0.00038764	-0.22	0.8261	0.0001	0.3553	0.5512

Figure 14

Table. Haplotype Frequency Estimates and Significance Levels of Case-control Comparison from Permutation Tests

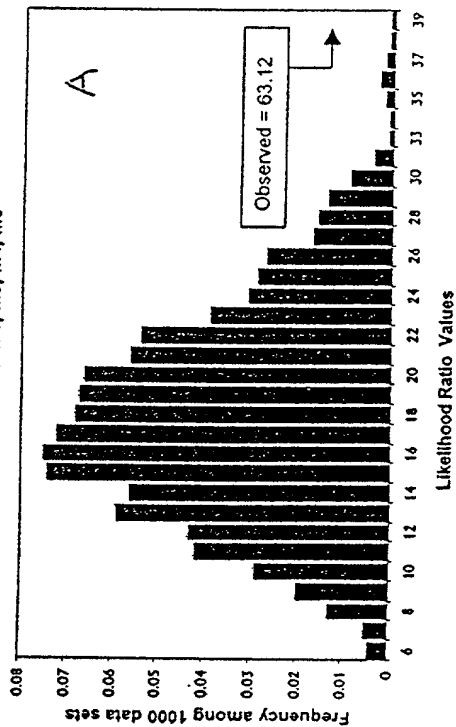
Chromosome 19 APOE Gene Region:									
Configuration 1									
M1 M2 M3 M4* M5 M6 M7 M8									
* part of <i>ε4</i> allele determination									
(APOEεSNP included in haplotypes)									
Haplotype	Overall	Case	Control	$\chi^2$	P value*	Configuration 2:			
						M1 M2 M3 M4* M5 M6 M7 M8			
						* part of <i>ε4</i> allele determination			
						(Loci included flank the APOEε4 SNP)			
Haplotype	Overall	Case	Control	$\chi^2$	P value*	Haplotype	Overall	Case	Control
TACA	0.007	0.012	0.000	1.83	0.243	TACA	0.207	0.192	0.220
CCCC	0.013	0.022	0.000	3.34	0.025	CACA	0.057	0.050	0.069
TTCA	0.009	0.009	0.007	0.04	0.864	TGCA	0.015	0.003	0.034
CTCA	0.031	0.049	0.000	7.41	0.014	CGCA	0.166	0.190	0.132
TCTA	0.224	0.197	0.258	1.81	0.072	TATA	0.021	0.019	0.023
CCTA	0.198	0.189	0.219	0.47	0.285	CATA	0.005	0.009	0.004
TTTA	0.000	0.000	0.000	0.00	0.116	TGTA	0.000	0.000	0.000
CTTA	0.004	0.006	0.002	0.26	0.837	CGTA	0.008	0.009	0.008
TCCG	0.002	0.003	0.000	0.44	0.664	TACG	0.232	0.262	0.195
CCCG	0.002	0.004	0.000	0.64	0.562	CACG	0.066	0.049	0.092
TTCG	0.088	0.115	0.056	3.56	0.023	TGCG	0.013	0.000	0.032
CTCG	0.079	0.110	0.042	5.22	0.023	CGCG	0.176	0.189	0.152
TCTG	0.138	0.124	0.159	0.85	0.276	TATG	0.000	0.000	0.000
CCTG	0.180	0.135	0.228	5.01	0.008	CATG	0.018	0.014	0.022
TTTG	0.017	0.014	0.017	0.04	0.78	TGTG	0.000	0.000	0.000
CTTG	0.010	0.010	0.012	0.04	0.846	CGTG	0.016	0.015	0.018
Likelihoods:	-1117.2	-668.7	-416.9	63.12**	0.0001		-1149.7	-621.6	-511.5
							33.34**		0.0041
Other Haplotype Configurations and Significance Levels									
Chromosome 19 region									
Configuration 3:	M1 M2 M3 M4* M5 M6 M7 M8	Haplotypes contain 4 locus				LRT **	P value*		
Configuration 4:	M1 M2 M3 M4* M5 M6 M7 M8	"				93.66	0.0001		
Configuration 5:	M1 M2 M3 M4* M5 M6 M7 M8	Haplotypes flank 4 locus				57.39	0.0001		
Configuration 6:	M1 M2 M3 M4* M5 M6 M7 M8	Haplotypes do not contain or flank 4 locus				45.64	0.0001		
Chromosome 13 region						13.48	0.2401		
Configuration 7:	M1 M2 M3 M4 M5	Haplotypes in 'control' region				17.29	0.0940		
Configuration 8:	M1 M2 M3 M4 M5	"				6.49	0.4930		

\* P values based on 10000 permutations

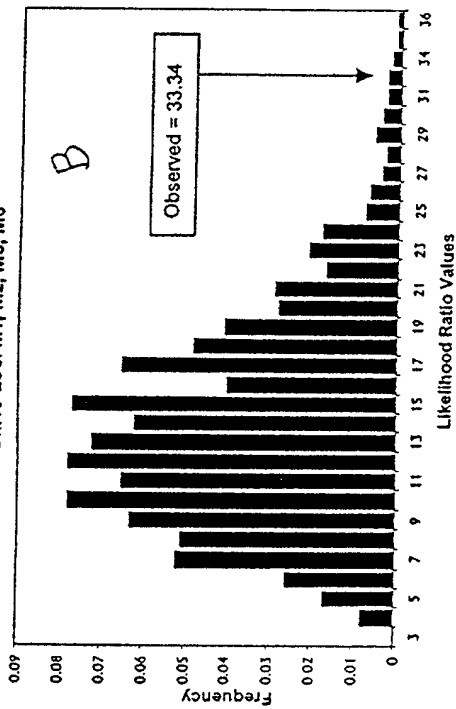
\*\* Likelihood ratio test statistic values for omnibus test

Figure 15

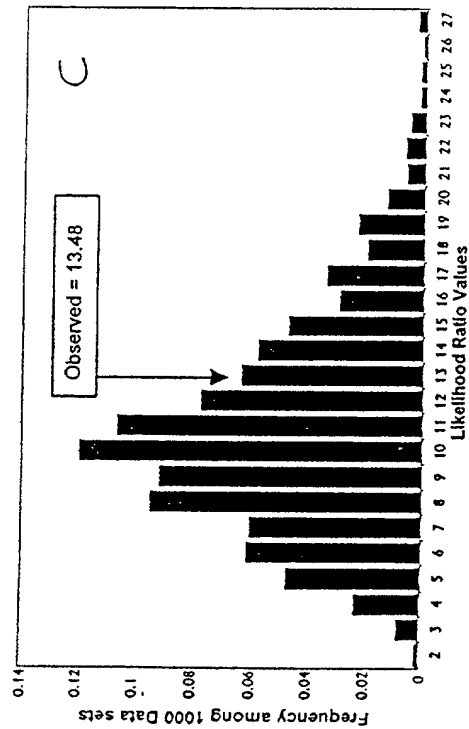
Empirical LR Distribution for 1000 Permutations  
--Ch.19 Loci M1, M3, M4, M6



Empirical LR Distribution from 1000 Permutations  
--Ch.19 Loci M1, M2, M5, M6



Empirical LR Distribution for 1000 Permutations  
--Ch.19 Loci M5, M6, M7, M8



Empirical LR Distribution for 1000 Permutations  
--Ch.13 Loci M2, M3, M4, M5

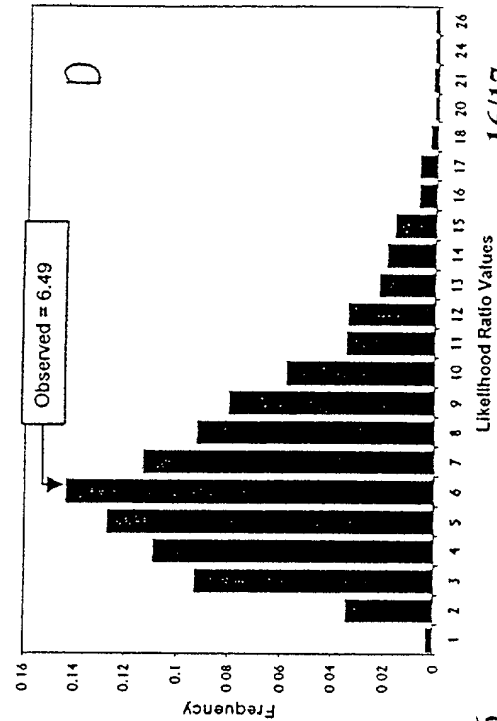


Figure 16



